

REMARKS

Claim 3 is amended to overcome the rejection thereof under 35 USC 112, second paragraph. As amended, the end layer of tin oxide is distinguished from the other layers of the stack.

Claim 1 is amended to patentably distinguish over Sun. Claim 1 now specifies that the layer to which the metal capping layer is directly adhered consists of tin oxide and, by exclusion, not the indium tin oxide layer 126 of Sun.

For advancing the prosecution of the application, it is also noted that the use of an indium tin oxide layer in Sun is not suggestive of the use of the claimed tin oxide. While Applicant's specification does not discuss the matter (as not being necessary), tin oxide is not an electrically conductive material and, in Applicant's claimed mirrors, does not function as an electrode. In Sun, conversely, the indium tin oxide is an electrical conductor and is used in Sun for such purpose. Specifically, persons of skill in the relevant art would not consider replacing the conductor indium tin oxide layer of Sun with the electrically non-conductive tin oxide layer according to the claims.

Claim 6 corresponds exactly to original dependent Claim 5, but is rewritten in independent form. The rejection of Claim 5 (now 6) is respectfully traversed.

Claim 6, identically as replaced Claim 5, specifies a stack of an integral number of pairs (i.e., more than one pair) in which all of the dielectric pairs comprise (or include) a layer of tin oxide. Concerning Claim 5, the Examiner notes that "Sun teaches all stated limitations, see column 2 line 60 through column 3, line 23". At column 3, line 7, Sun identifies the mirror dielectric layers as being "TiO₂/Al₂O₃", and it may be that the Examiner reads the symbol "TiO₂" as tin oxide. TiO₂, however, identifies the material titanium dioxide and not the claimed tin oxide (SnO); see Applicant's specification, page 5, first line of bottom paragraph. Accordingly, withdrawal of the rejection of original Claim 5 (rewritten, without substantive change, as independent Claim 6) is respectfully requested.

New Claim 7 further distinguishes from Sun in specifying that the metal layer is a "full" cap in that it comprises an end surface of the mirror for preventing transmission of light through the end surface. In Sun, the gold layer is apertured and light passes therethrough. Additionally, the gold layer of Sun is not a mirror end surface but is sandwiched between upper 134 and lower 114 reflectors of the Sun device. Being so sandwiched, the mechanical requirements of the fit between the gold layer 128 of Sun and the underlying layer 126 are likely different than in Applicant's device where the metal capping layer is not similarly sandwiched.

Withdrawal of the rejection of original Claim 5 (now Claim 6) and allowance of Claim 6 are requested. Allowance of the application is also requested.

Respectfully submitted

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

1 (amended) In a metal capped mirror comprising a stack of dielectric layers of alternating high and low indices of refraction capped with a layer of metal, the improvement comprising a layer consisting of tin oxide to which the metal capping layer is directly adhered.

3 (amended) An improved mirror according to Claim 2 wherein all of said stack layers other than said end layer of tin oxide are of materials other than tin oxide.